

REMARKS

In his Office action of January 18, 2005, the Examiner rejected claims 1, 7-19, and 25-27. He further objected to claims 2-6, and 20-24. In his remarks, the Examiner noted that Applicant's claim 12 should properly depend from claim 11 rather than claim 10.

In this Office action response, Applicant's claim 1 has been amended to now represent claim 2 rewritten in independent form. The Examiner has indicated that this claim so rewritten would be allowed. Claim 2 has been cancelled. Claims 3-18 have been appropriately amended to provide proper claim dependency. Also, claim 12 has been amended to depend from claim 11.

Next, Applicant's claim 19 has been amended to now represent claim 20 rewritten in independent form. The Examiner has indicated that this claim so rewritten would be allowed. Claim 20 has been cancelled. Claims 21-27 have been appropriately amended to provide proper claim dependency.

Accordingly, Applicant submits that claims 1, 3-19, and 21-28 are now allowable.

Next, Applicant's new claim 28 is directed to a method of providing a graphic display of a distribution network to provide personnel insight into network operations. A line segment of the network is monitored to obtain current information about a predetermined performance characteristic within the line segment. This information is then processed to ascertain relative performance characteristic values within different portions of the line segment. The results are then displayed in a graphic format, together with historical information about the line segment. This allows an observer to readily ascertain what is presently occurring at respective portions within the line segment, as well as what has previously occurred. This then allows to observer to determine whether operations within the network segment are acceptable; and if not, where there is a problem and its magnitude.

Applicant notes that "line segment" is a common term within the electric industry, with various line segments being interrelated; i.e., electrically connected to one another. In his method, Applicant preserves this relevance by ordering

line segments so they are graphed in order, with one path through a “tree” structure from “root” to a “leaf” being analyzed.

With respect to the prior art Wobben reference, the Examiner appears to use the term “segment” in a different context than Applicant uses it in his application and claims; i.e., in a generalized sense that could be used to describe any site. Further with respect to the Wobben reference, the method described therein significantly differs from that set forth in Applicant’s claim 28. For example, what would happen in Wobben if the circuit could not be monitored at all times? Or, what if the circuit was so large, or there was so much activity on it, one person could not properly monitor it? Another problem with the teachings of Wobben is what happens if an “event” is so brief that it is missed by the monitor; or, for whatever reason, the monitor forgets it occurred? The method of Applicant’s claim 28 addresses these problems by plotting historical data related to a line segment so an observer (person or computer) can readily make a judgment as to the significance of the data, quantify the magnitude of an event numerically; and, based on predetermined thresholds, determine what is significant for presentation to the network operator or manager.

With respect to the Bauer reference, it describes a method of troubleshooting a telephone network. Unlike the method of Applicant’s claim 28, which enable an electric utility to analyze the “health” of its distribution network before customers call to complain, in Bauer, an investigation only begins when a customer complains. This teaching is thus opposite to that of Applicant’s invention.

It will be appreciated that Applicant’s method involves instrumentation of every metered point with a distribution network with equipment to analyze the quality of service. This will, as a consequence, generate huge volumes of data that must be interpreted. Applicant’s invention is, however, an important step for a proactive, customer service oriented quality-monitoring/trouble-shooting process. Unlike Applicant’s invention, the method taught by Bauer is too manually intensive, while the method of Wobben method does not present the relationships in the line section data in a significantly useful manner.

Finally, with respect to Applicant's displaying of the results of information processing, the Examiner correctly notes that Wobben does not teach using a three dimensional display to facilitate understanding of information presented. Rather, the frames described in Wobben are all 2-dimensional frames, organized in a manner common on a personal computer, to present multiple "windows" or "frames" side by side on the same screen, and therefore not require multiple CRT's.

The Examiner further states that the Bush patent teaches that a three-dimensional graph which may be used to display characteristics of a distribution network. The Bush reference is directed to a displaying logistic information related to a supply chain, and not an electric distribution system. The graph is shown in Fig. 2B of Bush's 6,486, 899 patent. The figure is an isometric view of a geographic area with each distribution center represented by an icon on the map. The icon has an associated 2D graph 61 next to it. Bush indicates that this entire drawing may be rotated to gain a better view. However, the display neither teaches nor suggests Applicant's display of the results of the processing in a graphic format in a predetermined order, together with historical information (about line segments). Rather, the 2D graphs 61 include logistical information about distribution resources (Column 5, lines 47-54). Importantly, the invention of Applicant is not directed so much to the geographic location of various sites (or resources), as it is to their contribution in the topological sense of a network.

Importantly, none of the references, singly or in combination, provide both current and historical information, together, in a graphic format that allows one monitoring system operations to detect trends developing over time that may lead the observer to conclude that a problem is developing. This then allows the observer to take proper precautions to prevent the problem from occurring so customer service is not affected by a problem in a line segment.


Accordingly, Applicant submits that his new claim 28 is allowable.

Respectfully submitted,


J. Joseph Muller, Reg. No. 28,450

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The Commissioner is hereby authorized to charge any additional fees or credit overpayment under 37 CFR 1.16 and 1.17 which may be required by this paper to Deposit Account 162201. *Duplicate copies of this sheet are enclosed.*


J. Joseph Muller
Registration No: 28,450

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on April 15, 2005.


J. Joseph Muller